DEPARTMENT OF CONSERVATION
POSITION DUTY STATEMENT **CURRENT/PROPOSED**

NAME Vacant	**MCR** I
CLASSIFICATION Engineering Geologist	**POSITION NUMBER** 104-3756-001
WORKING TITLE Engineering Geologist	**DIVISION/UNIT** California Geological Survey/Regional Geologic and Landslide Mapping Program
EFFECTIVE DATE	**LOCATION** Statewide
BARGAINING UNIT R09	**CONFLICT OF INTEREST CATEGORY** 3, 7

GENERAL STATEMENT: Under the direction of the Senior Engineering Geologist (Supervisor), the Engineering Geologist is responsible for preparing detailed 2D and 3D geologic maps and data, of various categories, and preparing reports to accompany them. The incumbent will specifically perform activities associated with the development of highly technical 3D geologic framework mapping and modeling products, including publicly accessible 3D visualization and data delivery products. Additionally, the incumbent will document work products and processes related to the technical work deliverables. Duties include, but are not limited to:

A. **SPECIFIC ACTIVITIES: ESSENTIAL / MARGINAL FUNCTIONS**

- **ESSENTIAL FUNCTIONS**
  - **40% 2D and 3D Geologic Mapping**
    Uses aerial and satellite imagery, digital topography, field mapping techniques, subsurface data, and existing geologic map data to prepare two- and three- dimensional (2D and 3D) geological models depicting the extents of geologic units, existing landslides, faults, seismic properties, groundwater levels, mineral resources, and porous units suitable for carbon sequestration. Compiles digital geologic map, subsurface, and geophysical data from available sources to prepare 3D geologic models, including cross sections, fence diagrams, and associated subsurface visualization tools using 3D geologic modeling software and geographic information systems (GIS). Writes reports summarizing regional geology, landslide characteristics, faulting, seismic hazards, mineral resources, groundwater recharge and carbon storage properties, stratigraphic classification, and the analyses used to prepare maps and models. Works with professional peers in CGS, other governmental agencies, academia, and private industry to maintain a state-of-the-art mapping program and assist in technology transfer of modeled deliverables.

  - **40% Technical Review**
    Reviews publications and databases on the extent and detail of subsurface borehole data, interprets lithologic, structural, geophysical, geotechnical, and groundwater data. Assesses accuracy of borehole location, lithologic classification, depth intervals, and geophysical logging. Performs systematic quality assurance and quality control of data for inclusion into 3D geologic models. Works with professional peers in CGS, other governmental agencies, academia, and private industry to develop a 3D model web interface and analytical tools.

- **10% Public Outreach**
  Participates in outreach efforts to local government, news media, professional organizations, and the general public. Effectively communicates complex technical work, tailored to a variety of target audiences and deliverable recipients. May assist public safety agencies by inspecting and assessing life-safety, utility, transportation, and private property damage in areas affected by earthquakes, severe storm events and post-fire rainstorms. Finds and maps ground-failure features following large earthquakes. Conduct field review studies at school, hospital and other essential facilities sites.

- **MARGINAL FUNCTIONS**
  - **5% Technical Presentation**
    Provide technical presentations of work products at scientific and engineering professional meetings, contribute written technical articles to peer-reviewed journals, and provide technical peer-review of work products for co-workers.

  - **5% Administrative**
    Performs administrative duties including, but not limited to: adheres to Department policies, rules and procedures; submits administrative requests including leave, overtime (if applicable), travel, and training in a timely and appropriate manner; accurately reports time in the Daily Log system; and submits timesheets by the due date.

B. **SUPERVISION RECEIVED**
Works under the supervision of the Senior Engineering Geologist (Supervisor) within the Geologic and Landslide Mapping Program of CGS.

C. **SUPERVISION EXERCISED**
NONE

D. **ADMINISTRATIVE RESPONSIBILITIES FOR SUPERVISORS AND MANAGERS**
NONE

E. **PERSONAL CONTACTS**
The Engineering Geologist routinely interacts with other CGS and DOC staff, federal, state and local agencies, and may include extensive public and professional contact. Contacts may be made via personal interaction, written correspondence, telephone, and/or email.

F. **ACTIONS AND CONSEQUENCES**
If these functions are not adequately performed, consequences may include, but are not limited to:
- CGS will not meet its legislative mandates to identify geological hazards and resources, potentially exposing the citizens of California to threats to life, health, and economic damages.
- CGS will not meet its contractual obligations to assure timely and accurate completion of work under interagency agreements and grants.
- Potential loss of contract funding significantly impacting program budget.
- Negative impacts to CGS's relationships with our state and federal partners.

G. **WORKING CONDITIONS/PHYSICAL REQUIREMENTS**

- Telework and working in an office environment, sitting at a desk during core office hours using a desktop computer, keyboard, mouse, monitor and printers under non-natural lighting for prolonged periods of time.
- Moving about the office and standing or sitting during in person meetings.
- Bending and stooping to retrieve and replace files and records.
- Use of multi-line telephone console or a cordless telephone.
- Reaching (above and below shoulder level).
- Work in a high-rise building.
- Field work for engineering geological evaluations and local government agencies.
- Field work in mountainous, forested and desert terrains; in road cuts, mines or other excavations; around drilling and excavation equipment; in trench excavations or large diameter borings; on foot, in off road vehicles, or in fixed-wing or rotary wing aircraft.
- Post-earthquake, post-fire, or landslide field response may expose employee to additional hazards created by event ground failures or shaking.
- Occasional walking on minimally irregular surfaces at field-sites may be required.

H. **OTHER INFORMATION**

All employees are responsible for contributing to an inclusive, safe, and secure work environment that values diverse cultures, perspectives, and experiences, and is free from discrimination.

Other Qualifications:

- Ability to communicate effectively (verbally/written)
- Possess good interpersonal skills
- Ability to work independently as well as in a team environment
- Ability to organize and prioritize multiple assignments and deadlines
- Ability to promote a positive working environment and relationships with others.
- Possession of a valid California driver's license.

I have read and understand the duties listed above and I can perform these duties with or without reasonable accommodation (if you believe reasonable accommodation is necessary, discuss your concerns with your supervisor).		
Employee Signature	**Employee Printed Name**	**Date**

I have discussed the duties of this position with and have provided a copy of this duty statement to the employee named above.		
Supervisor Signature	**Supervisor Printed Name**	**Date**